DOCUMENT RESUME

ED 022 615 RC 002 689

By- Jordan, Max F.; And Others

ASPIRATIONS AND CAPABILITIES OF RURAL YOUTH IN RELATION TO PRESENT AND PROJECTED LABOR MARKET REQUIREMENTS.

Arkansas Univ., Fayetteville.; Dept. of Agriculture, Washington, D.C. Economic Research Service.
Report No-BULL-722
Pub Date May 67
Note-51p.
EDRS Price MF-$0.25 HC-$2.12
Descriptors-ASPIRATION, *CAREER PLANNING, CAUCASIAN STUDENTS, *LABOR MARKET, MANPOWER NEEDS, NEGRO STUDENTS, *OCCUPATIONAL ASPIRATION, *RURAL YOUTH
Identifiers-*Arkansas, General Aptitude Test Battery, Guilford Zimmerman Temperament Survey, Kuder Preference Record Vocational, Occupational Aspiration Scale, Social Class Value Orientation Inventory

A study was conducted to: determine the aspirations and capabilities of rural youth in selected low-income counties in Arkansas; relate aspirations, capabilities, and the discrepancy between the two to the experience background of the youths studied; and relate the youths' occupational plans to present and projected labor market requirements. The sample for this study included 165 senior boys in 10 high schools in Little River and Sevier Counties, Arkansas. In addition to obtaining background information by administering a questionnaire and checking school records, 7 tests and inventories were administered. Five variables were found to be significantly related to occupational aspirations: mechanical interest, scientific interest, ascendance, social class value orientation, and the number of years of education and training planned after high school. In addition, the level of occupational aspiration indicated by this sample of rural boys was similar to groups in high-income, urban areas in Michigan. (VM)

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL OFFICE OF EDUCATION POSITION OR POLICY.

RECEIVED
SEP 30 1968
NMSU
E.R.I.C.

Aspirations and Capabilities of Rural Youth

In Relation to Present and Projected Labor Market Requirements

ED022615

RC 002689

AGRICULTURAL EXPERIMENT STATION
University of Arkansas Division of Agriculture
Fayetteville, Arkansas

in cooperation with

ECONOMIC DEVELOPMENT DIVISION
Economic Research Service
United States Department of Agriculture

MAY, 1967

BULLETIN 722

CONTENTS

	Page
Introduction	3
Justification for the Study	3
Statement of the Research Problem	4
Procedures	5
Description of the Sample	5
Data Used in the Study	6
Statistical Procedure	10
Occupational Aspirations Analysis	10
Significance of Groups of Variables	11
Significance of Individual Variables	11
Capabilities Analysis	17
Significance of Groups of Variables	17
Significance of Individual Variables	18
Analysis of the Discrepancy between Aspirations and Capabilities, and Relationship of Students' Plans to Labor Market Requirements	23
Discrepancy Scores	23
Significance of Groups of Variables	23
Significance of Individual Variables	23
Relationship of the OAS and Capability Score, and the Discrepancy Score	27
Occupational Plans in Relation to Present and Projected Labor Market Requirements	29
Summary and Conclusions	31
Literature Cited and Other Selected References	34
Appendix A	37
Appendix B	43
Appendix C	44
Appendix D	45
Appendix E	47
Appendix F	49
Acknowledgments	50

Agricultural Experiment Station, University of Arkansas Division of Agriculture, Fayetteville. John W. White, vice-president for agriculture; E. M. Cralley, director. BPC2.5M567

Aspirations and Capabilities of Rural Youth

By MAX F. JORDAN, JAMES F. GOLDEN,
and LLOYD D. BENDER[1]

Department of Agricultural Economics and Rural Sociology

The income position of rural areas of the United States relative to the rest of the country has improved little in the recent past, although it has been a period of rapid technological change. Per capita incomes in Arkansas did gain relative to incomes in the United States, but not at a rate that would bring them into parity with the United States in the immediate future (28).

Technology has changed very rapidly not only in farming but throughout most of the non-farm sector. Brisk technological change profoundly affects the role of future participants in the labor force in several ways. First, technical change has been unevenly distributed, and it is forcing a relocation of the labor force spatially and among skills. Second, technical production changes are reflected eventually in demands for different types of goods and services in the market, and they force concurrent shifts in job skills. Third, technical change results in greater productivity per worker. It forces some workers to change jobs and those remaining in present jobs to become more highly skilled. Fourth, farm youth, usually with less training and perhaps lower aspirations, are thrown into a labor market for which they are not prepared because they do not possess the proper skills.

Justification for the Study

Some years ago, the State of Arkansas began a concerted effort to adopt measures designed to facilitate economic growth. The needs of the state were described well by the emergency clause in Act 404 of the 1955 Legislature establishing the Arkansas Industrial Development Commission(1):

ED022615

[1]Max F. Jordan and Lloyd D. Bender are agricultural economists, Economic Development Division, ERS, U. S. Dept. of Agriculture, stationed at Fayetteville, Arkansas, and Columbia, Missouri, respectively; James F. Golden was formerly a graduate student in education, University of Arkansas.

> It has been found . . . that the State of Arkansas has had heretofore an inadequate program for the agricultural and industrial development of the State and . . . has been unable to provide for its inhabitants sufficient opportunities in agriculture and industry, . . . on account thereof the State of Arkansas has suffered great losses of population and a decreasing standard of living for its inhabitants . . . unless such an adequate program for the agricultural and industrial development of the State be immediately undertaken the State of Arkansas will suffer immediate and irreparable further loss in population and industrial expansion . . .

The difficulty of preparing the labor force in low-income farm areas for non-farm employment has been compounded by the process of selective migration. At high levels of national employment, individuals with higher levels of aspiration and ability apparently migrate quickly to non-farm jobs. Therefore, those remaining on the farm might be expected to have relatively lower levels of aspiration or ability.

Studies by Johnson (21) and by Pihlblad and Gregory (34) support the hypothesis that migration of rural youth toward urban areas tends to be selective of the more intelligent and of those with superior capabilities. Fliegel (10) contended that there is a significant relationship between levels of aspiration and farm family income from off-farm sources in areas where non-farm jobs are generally available. He concluded that many members of the labor force with high aspiration levels are rejecting farming as an occupation. Bishop (2) has argued that much of the low income rural population has low levels of aspiration.

It is generally accepted that training improves the capabilities of individuals and promotes economic development. However, specific programs are meaningful only if designed in relation to existing and desired levels of attainment. Furthermore, programs can be successfully carried out only if the personal characteristics in question are amenable to change. A sufficiently high level of motivation or aspiration in prospective trainees is necessary to cause them to put aside other alternatives and devote themselves to training.

A critical need exists at this time for descriptive studies to provide guidelines for planning training programs. Such studies should examine levels of aspiration as well as physical and intellectual capabilities of the trainees, and should be related to present and projected needs of the labor market.

Statement of the Research Problem

The objectives of this study are: (1) To determine the vocational aspirations and capabilities of youth in selected areas of

Arkansas in relation to present and projected needs of the labor market; (2) To relate these aspirations and capabilities to the experience backgrounds of the youths studied; and (3) To develop from (1) and (2) recommendations for education and training programs and occupational information services that will place program participants in occupations providing adequate incomes.

The following questions were addressed in this study: (1) Which characteristics under investigation are significantly related to occupational aspiration? (2) Does information readily available from school records contribute significantly to the prediction of occupational aspirations? (3) Does information that can be gathered by interview contribute significantly to the prediction of occupational aspirations? (4) Does test information contribute to the prediction of occupational aspirations? (5) Which variables are closely related to capabilities? (6) Which variables are significantly related to the discrepancy between occupational aspirations and capabilities? (7) What are the occupational plans for the students in this sample in relation to present and projected labor market requirements?

PROCEDURES

Description of the Sample

A low income area comprised of two predominately rural counties—Little River and Sevier—was studied. The 197 senior boys in the seven white and three Negro secondary schools in the two counties were included in this study. A complete battery of tests and questionnaires was administered to 165 of these boys—44 Negro and 121 white students.[2] Two-thirds of the boys were rural residents and half of these rural residents were farm boys.[3]

Little River County, located in the southwestern corner of Arkansas, contains 350,000 acres (544 square miles) of relatively level land. Approximately 65 percent of the county (227,000 acres) is in a variety of hardwood and rapidly growing pine timber. Nearly 14,000 acres in the western part are predominately used for beef cattle production. The remainder of the county along the Red River produces both livestock and row crops. The county seat, Ashdown, is the trade center for the county. A trailer manufacturing plant, a garment factory, a cement plant, some wood

[2]The questionnaire with a tabulation of responses is included in Appendix A.
[3]The other one-third, classed as non-rural, lived in Ashdown and DeQueen, which had populations of only about 3,000 each and exhibited rural characteristics.

industries, and a few smaller enterprises comprise the industrial base.

Sevier County is located just north of Little River County. It is bounded on the west by Oklahoma. It contains 374,000 acres (585 square miles). Approximately 79 percent of the county (295,800 acres) is in hardwood and pine timber. The remainder of the land is used for pasture, orchards, poultry, and crop production. DeQueen is the county seat and trade center for the area. Industrial facilities include timber processing plants, a poultry processing plant, and other small industries.

Both counties had severe population losses from 1940 to 1960 (46). Little River County had a loss of 48 percent. The 1960 population was 9,211 with approximately 70 percent rural and 31 percent Negro. Sevier County had a loss of 33 percent. The 1960 population was 10,156 with 72 percent rural and 8 percent Negro. These losses were associated with mechanization of farming, increased holdings by large timber companies, lack of employment opportunities for young people, and changes in the type of employment skills required in the industry of the area.

Characteristics of the school districts in the two counties are indicated in Table 1. Ashdown, DeQueen, Foreman, and Horatio schools had guidance and counseling programs.

Data Used in the Study

The dependent variables for this study are the level of occupational aspiration, the capabilities score, and the discrepancy between aspirations and capabilities.

The vocational aspirations of the students were determined through the use of Haller's Occupational Aspirations Scale, OAS (16). The scale assigns a numerical score, based on prestige ratings, to occupational choices. OAS scores indicating the individual's level of occupational aspiration may range from 0 to 72.

The students' capabilities were measured with the General Aptitude Test Battery (GATB). The capability score was derived by considering together the North-Hatt hierarchy of occupations as reflected in the OAS and the GATB.[4] Each occupation listed in the OAS was given a minimum cutoff score on the relevant tests of the GATB. The choices of relevant tests and cutoff scores were determined by a panel of professional vocational counselors using as guidelines publications on occupational requirements (47). The

[4]The North-Hatt score is also called the NORC score(31).

Table 1. Characteristics of the School Districts Included in Little River and Sevier Counties, 1964-65

Characteristics	Little River County			Sevier County					State average, per district
	Ashdown[1]	Foreman[2]	Winthrop	Gillham	Horatio	Lockesburg	County District[3]	DeQueen	
Area (square miles) 1964-65	339	161	50	150	108	120	25	150	130
Number of senior boys, 1964-65	69	28	10	10	11	8	17	44	n.a.
Average daily attendance, 1964-65	1,414	726	178	287	408	310	165	1,143	985
Enumeration, 1964	1,601	807	212	318	429	357	183	1,136	1,115
Mills voted, 1964	45	46	45	36	38	40	46	42	39
Number of classroom teachers, 1964-65	62	37	10	15	18	13	10	43	41
Average salary per classroom teacher, 1964-65	$3,880	$3,862	$3,802	$4,110	$3,861	$4,050	$4,200	$4,304	$4,094
Per ADA									
Assessed valuation, 1964	$3,301	$4,404	$3,910	$4,595	$3,087	$4,217	$1,081	$3,923	$3,931
Local receipts, 1964-65	$ 122	$ 168	$ 158	$ 154	$ 109	$ 152	$ 46	$ 147	$ 154
Vocational aid, 1964-65	$ 4	$ 7	.....	$ 10	$ 8	.....	$ 17	$ 3	$ 3
Instructional expense, 1964-65[4]	$ 8	$ 9	$ 3	$ 5	$ 3	$ 3	$ 1	$ 4	$ 8
Current expense, 1964-65	$ 251	$ 297	$ 283	$ 322	$ 250	$ 284	$ 331	$ 244	$ 256

[1]Includes Little River County Training School.

[2]Includes Unity High School.

[3]Sevier County High School.

[4]Excludes teacher salaries.

Source: State Department of Education Report on House Concurrent Resolution No. 58 of 1961 Arkansas General Assembly, State Dept. Educ., Little Rock, January, 1965.

scores of each student on the relevant aptitude test were then compared to the cutoff scores assigned occupations within each of the eight OAS questions. The highest occupation the student was capable of attaining in each of the OAS questions was ascertained. The equivalent OAS score for that occupation was assigned as the capability score of the student on that question. The maximum possible score was 9 on each of the eight questions. Thus the capability and OAS scores were defined on the same scale and were directly comparable.

The discrepancies between individuals' aspirations and capabilities—discrepancy scores—were determined by subtracting the aspiration scores from the capability scores and adding 100 to eliminate negative scores. For example, a student with a capability score of 28 and an aspiration score of 40 would have a discrepancy score of 88.

The independent variables are described by the instruments used to measure them. The GATB, used to determine aptitudes of the individuals (48), was produced by the U. S. Employment Service (ESD) for use in guiding persons seeking work. The ESD cooperated in administering the test. The nine aptitudes measured are intelligence, verbal aptitude[5], numerical aptitude, spatial aptitude, form perception, clerical perception, motor coordination, finger dexterity, and manual dexterity.

The Kuder Preference Record-Vocational-Form C was administered to measure the interests of the subjects (23). Interests are measured in the following areas: outdoor, mechanical, computational, scientific, persuasive, artistic, literary, musical, social service, and clerical.

The Guilford-Zimmerman Temperament Survey was administered to assess personality traits (14). Traits assessed are general activity, restraint, ascendance, sociability, emotional stability, objectivity, friendliness, thoughtfulness, personal relations, and masculinity.

Reading speed and comprehension were measured by the Davis Reading Test (6). Two reading scores are derived: level of comprehension and speed of comprehension.

The Social Class Value Orientation Inventory was administered to determine the middle-class or lower-class orientation of the student (43). It is made up of the following dimensions: time

[5]Verbal aptitude has been defined as the ability to associate word meanings correctly and to weave ideas together and make inferences about them. "Verbal aptitude" has also been used synonymously with "reading comprehension" (6).

orientation, control of destiny, preservation of self, and social world.

The Rural-Urban Orientation Inventory was administered to determine the rural-urban tendencies of the student (44). This instrument consists of the following value and opinion statements: individual autonomy over actions and time-use; moral attributes in man's work or nature; distinctive city characteristics—social density, distance, and heterogeneity; and institutional variety and richness.

Other data used in this study were obtained from school records and a questionnaire adapted from one used by Haller and Miller giving background information concerning the student, his parents, his siblings, and his socio-economic status (16). Data from the questionnaire and school record information, along with test data, were related in regression analysis (see Appendix B). A description of these selected variables is as follows:

Age, to the nearest birthday, converted to age in months.

Regular home of student, whether with parents or others.

Semesters of extra-curricular activities, in terms of regular, active participation in recognized extra-curricular school activities.

Semesters of vocational subjects, including business education, industrial arts, and vocational agriculture subjects completed by the end of the senior year.

Semesters of vocational agriculture, completed by the end of the senior year.

Knowledge of work planned, showing the extent of the student's knowledge about his chosen occupation and where he received or expected to receive that knowledge.

Student's estimate of his ability, indicating the student's perception of his ability for his chosen occupation.

Years training and education expected, including any type of training or education that the student expected to get after high school.

North-Hatt score for student's planned occupation, based on the North-Hatt scale. (Occupations not included on the scale were given a score by five persons based on the mean score for the occupational classification and the score for a similar occupation of the North-Hatt scale.)

Where student lived, whether on a firm, or in a village or town.

Where student expected to get help in becoming established in his chosen occupation, whether from parents, relatives, others, or no one.

North-Hatt score for father's occupation. The North-Hatt score assigned to the occupation of the student's father or guardian. (Occupations not listed on the scale were given the same treatment as were students' occupational choices that were not listed.)

Mother's work, based on work outside the home.

Father's education, based on the number of grades completed in school.

Mother's education, based on the number of grades completed.

Parents' income, based on the student's conception of parents' income in relationship to other families in the area.

Importance of job parents want for son, based on the student's perception of his parents' desire.

Family help in securing education and training, based on the student's estimate of financial help from the family.

Number of persons living in the home, at the time the information was given.

Father's church attendance, at least monthly.

Educational status of eldest sibling, including high school and college attendance.

Number of senior boys, based on the number in the student's school at the time the information was secured.

Race, classified as either white or Negro.

Grade point average, based on seven semesters of credit in the solid subjects (mathematics, languages, sciences, and social sciences), computed on the basis of A equals 4, B equals 3, C equals 2, D equals 1.

Statistical Procedure

A multiple regression model was used to test the importance of each variable or each group of variables under consideration. The statistical test involves a comparison of a full regression model—one with a complete set of independent variables—and a restricted regression model. The restricted model has only one variable, or one group of variables, excluded to see what effect it had on explanatory power. An appropriate statistical procedure indicated significance, or lack of significance, of the variable or group dropped. The statistical tests are in Appendix C, D, and E.

This procedure results in a set of variables that are significantly related to each of the dependent variables, but are not closely related among themselves. Other variables, not discussed here, may be highly associated with the dependent variable, but their addition to the set of variables used here would not add greatly to the explanatory power of the regression model.

OCCUPATIONAL ASPIRATIONS ANALYSIS

The regression of occupation aspiration scores on selected variables and groups of variables was used to determine (1) which characteristics are related to occupational aspirations, and (2) whether the relationship between occupational aspirations and

groups of other variables (e.g., data from school records, interview data, and other test data) is close enough to use indirect methods of estimating occupational aspirations.

Significance of Groups of Variables

The grouping of information available from school records (Group 1) included grade point average, extra-curricular activities, training in vocational subjects, student age, and number of senior boys in the school. The information that could be gathered by interviews (Group 2) included the years of education and training expected, the parents' educational levels, the importance of the job the parents wanted for their son, the National Opinion Research Center (NORC or North-Hatt) score for the student's planned occupation and for the father's occupation, and the father's church attendance.

The data from the testing and inventory instruments were subdivided into three groups. The individual aptitude scores from the GATB, the rural-urban orientation scores, and the social class value orientation scores comprised Group 3. Group 4 consisted of scores from the Kuder Vocational Preference Scale on outdoor, mechanical, computational, and scientific interests. Scores from the Guilford-Zimmerman Temperament Survey on ascendance, sociability, and thoughtfulness traits comprised Group 5.

The only groups significantly related to the OAS were Groups 3 and 4 (Appendix C). Thus, an estimation of levels of occupational aspirations cannot be obtained readily without some testing.

Significance of Individual Variables

To determine which individual characteristics under investigation were significantly related to occupational aspirations, each variable was deleted singly from the full model and the significance of the drop in R^2 was determined by the F test (Appendix C). Variables 12 (mechanical interest), 14 (scientific interest), 23 (ascendance), 35 (social class value orientation), and 38 (number of years of education and training expected) were significantly related to the OAS.

Mechanical Interest

Mechanical interest, one of the scales on the Kuder Interest Inventory, had a mean value of 42 and a standard deviation of 10.79. The mean score of 42 ranked in the 40th percentile on the Kuder Interest Inventory norms.* Mechanical interest had a nega-

*The 25th to 75th percentile is considered the average range in all Kuder Interest categories.

tive correlation of -.365 with the OAS. This relationship indicates that if a person has high mechanical interest (prefers work with machines and tools), he will probably have low occupational aspirations. This relationship is in the expected direction since the mechanical trades are not accorded the higher status of professional, technical, and managerial occupations.

The probability of obtaining a certain aspiration level with a given mechanical interest score is presented in Table 2. For example, of the 15 students who scored in the 16 to 27 range on the mechanical interest scale, 27 percent (4) scored in the 30 to 44 range on the OAS, 53 percent (8) scored in the 45 to 59 range, and 20 percent (3) scored in the 60 to 74 range.

Table 2. Mechanical Interest: Number and Percent of Students Scoring in Specified Score Groups on the Mechanical Interest and the Occupational Aspirations Scale

	Occupational aspirations scale					
Mechanical interest scale	0 to 14	15 to 29	30 to 44	45 to 59	60 to 74	Total
			Number			
16 to 27			4	8	3	15
28 to 39		7	26	15	5	53
40 to 51		10	36	14	1	61
52 to 63	1	14	10	5	2	32
64 to 75		1	3			4
Total	1	32	79	42	11	165
			Percent[1]			
16 to 27			27	53	20	100
28 to 39		13	49	28	10	100
40 to 51		16	59	23	2	100
52 to 63	3	44	31	16	6	100
64 to 75		25	75			100
Total	1	19	48	25	7	100

[1]Percentages are rounded to the nearest whole percent.

Scientific Interest

Scientific interest, also on the Kuder Interest Inventory, had a mean score of 43 and a standard deviation of 10.38. This mean score ranked at the 56th percentile on the normative group of the Kuder Inventory. Scientific interest had a correlation of .41 with the OAS. This indicates that persons having high scientific interest tend to have high occupational aspirations. Scientific interest indicates that the student likes to discover new facts and

solve problems. Occupations in this area are usually in the professional and technical group. Since these occupations have high status, the scientific scale would be expected to have a fairly high correlation with the OAS. The only other interest scale that had a significant positive correlation with the OAS was computational (.27).

The probability of obtaining a certain aspiration level with a given scientific interest score is presented in Table 3. For example, of the 57 students who scored in the 28 to 39 range on the scientific interest scale, 28 percent (16) scored in the 15 to 29 range on the OAS, 56 percent (32) in the 30 to 44 range, and 16 percent (9) in the 45 to 59 range.

Table 3. Scientific Interest: Number and Percent of Students Scoring in Specified Score Groups on the Scientific Interest and the Occupational Aspirations Scale

Scientific interest scale	Occupational aspirations scale					Total
	0 to 14	15 to 29	30 to 44	45 to 59	60 to 74	
			Number			
16 to 27		2	6	1		9
28 to 39		16	32	9		57
40 to 51	1	13	31	16	4	65
52 to 63		1	9	14	6	30
64 to 75			1	2	1	4
Total	1	32	79	42	11	165
			Percent[1]			
16 to 27		22	67	11		100
28 to 39		28	56	16		100
40 to 51	2	20	47	25	6	100
52 to 63		3	30	47	20	100
64 to 75			25	50	25	100
Total	1	19	48	25	7	100

[1]Percentages are rounded to the nearest whole percent.

Ascendance

Ascendance, one of the scales on the Guilford-Zimmerman Temperament Survey, concerns leadership habits, speaking with individuals and groups, persuading others, being conspicuous, self-defense, and bluffing. Positive qualities in these items would be expected to be related to higher occupational aspirations since most of the occupations associated with high aspirations also require these positive qualities.

Ascendance had a mean score of 15 and a standard deviation of 4.45. This ranked at the 50th centile on the norms of the Guilford-Zimmerman.[7] The correlation coefficient (.31) of the ascendance with the OAS was similar to the findings of other studies, in that personality variables had only low and moderate correlations with aspirations. Other significant correlations between the Guilford-Zimmerman scales and the OAS were thoughtfulness (.28), sociability (.24), and general activity (.17).

The probability of obtaining a certain aspiration level with a given ascendance score is presented in Table 4. For example, of the 29 persons who scored in the 6 to 11 range on the ascendance scale, 27 percent (8) scored in the 15 to 29 range on the OAS, 59 percent (17) scored in the 30 to 44 range, and 14 percent (4) scored in the 45 to 59 range.

Table 4. Ascendance: Number and Percent of Students Scoring in Specified Score Groups on the Ascendance and the Occupational Aspirations Scale

Ascendance scale	Occupational aspirations scale					
	0 to 14	15 to 29	30 to 44	45 to 59	60 to 74	Total
			Number			
0 to 5	1	1	1	1		4
6 to 11		8	17	4		29
12 to 17		18	38	18	3	77
18 to 23		5	23	17	7	52
24 to 30				2	1	3
Total	1	32	79	42	11	165
			Percent[1]			
0 to 5	25	25	25	25		100
6 to 11		27	59	14		100
12 to 17		23	50	23	4	100
18 to 23		10	44	33	13	100
24 to 30				67	33	100
Total	1	19	48	25	7	100

[1]Percentages are rounded to the nearest whole percent.

Social-Class Value Orientation

The SCVO was designed to distinguish between middle-class and lower-class orientation. Higher scores indicate middle-class orientation; lower scores indicate lower-class orientation. SCVO had a correlation coefficient of .40 with the OAS. This coefficient

[7]The 50th centile is about average for the norm group.

would be expected to be .40 or higher since other studies have shown that socio-economic levels are related to occupational aspirations, in that the higher the socio-economic level the higher the aspiration level (8). Students of lower socio-economic level desire to get ahead but at lower levels than do students of higher socio-economic level.

The probability of obtaining a certain aspiration level with a given SCVO score is presented in Table 5. For example, of the 13 students who scored in the 22 to 25 range on the SCVO, 54 percent (7) scored in the 15 to 29 range on the OAS, and 46 percent (6) scored in the 30 to 44 range.

Table 5. Social Class Value Orientation: Number and Percent of Students Scoring in Specified Score Groups on the Social Class Value Orientation and the Occupational Aspirations Scale

	Occupational aspirations scale					
Social class value orientation scale	0 to 14	15 to 29	30 to 44	45 to 59	60 to 74	Total
			Number			
14 to 17		1				1
18 to 21		1	3			4
22 to 25		7	6			13
26 to 29	1	18	48	22	3	92
30 to 33		5	22	20	8	55
Total	1	32	79	42	11	165
			Percent[1]			
14 to 17		100				100
18 to 21		25	75			100
22 to 25		54	46			100
26 to 29	1	20	52	24	3	100
30 to 33		9	40	36	15	100
Total	1	19	48	25	7	100

[1]Percentages are rounded to the nearest whole percent.

Years Education and Training Expected

The number of years of education and training expected after high school would be expected to be a good predictor of the OAS since the OAS is based on the North-Hatt scale, which is a prestige scale. Usually the higher the prestige of an occupation, the higher the educational requirements. The mean value of this variable indicated that these students expected between 2 and 3 years of further education and training after high school. Great emphasis on educational requirements may not be viewed realistically by the high school senior. Werner and Murray (51)

found that parents as well as their children want high status jobs for the children; therefore, the children enroll in the college preparatory curriculum in high school.

The number of years of education and training expected had a correlation coefficient of .47 with the OAS. This relationship would be expected since more emphasis is placed on the need for education for higher-status jobs. Haller and Miller reported a correlation of .64 between the OAS and years of college planned (16). Sewell and others reported a correlation of .52 between the level of occupational aspiration and the years completed in college 7 years later (16).

The probability of obtaining a certain aspiration level with a given number of years of education and training expected is presented in Table 6. For example, of the 30 students who expected two years of education and training, 30 percent (9) scored in the 15 to 29 range on the OAS, 57 percent (17) scored in the 30 to 44 range, 10 percent (3) scored in the 45 to 59 range, and 3 percent (1) scored in the 60 to 74 range.

Table 6. Additional Education or Training Expected: Number and Percent of Students Expecting a Certain Number of Years of Education or Training After High School, and Scoring in Specified Groups on the Occupational Aspirations Scale

Years of education and training expected after high school	Occupational aspirations scale					
	0 to 14	15 to 29	30 to 44	45 to 59	60 to 74	Total
			Number			
No response		1	2			3
None		8	8	2		18
Less than 1 year		3	3			6
1 year		2	5	1		8
2 years		9	17	3	1	30
3 years			3			3
4 years	1	6	34	24	1	66
5 years or above		3	7	12	9	31
Total	1	32	79	42	11	165
			Percent[1]			
No response		33	67			100
None		44	45	11		100
Less than 1 year		50	50			100
1 year		25	63	12		100
2 years		30	57	10	3	100
3 years			100			100
4 years	2	9	51	36	2	100
5 years or above		10	22	39	29	100
Total	1	19	48	25	7	100

[1]Percentages are rounded to the nearest whole percent.

Summary

This section has presented the results of the regression of the OAS on selected variables and their relationship to the OAS. The following variables were significantly related to occupational aspirations: mechanical interest, scientific interest, ascendance, social class value orientation, and years of education and training expected.

Variables that could be obtained easily from school records were not significantly related to occupational aspirations.

With the exception of information on education and training desires, variables that could be gathered easily by interview were not significantly related to occupational aspirations.

Testing and inventory instruments that produced information significantly related to occupational aspirations were: Kuder Preference Record-Vocational (mechanical and scientific interest were the scales that were significant), Guilford-Zimmerman Temperament Survey (ascendance was the significant scale), and the social class value orientation inventory.

CAPABILITIES ANALYSIS

The regression of capability scores on selected variables and groups of variables in full and subsequent restricted models was used to determine which characteristics (variables) are related to capability scores, and which groups of variables are related to capability scores.

Significance of Groups of Variables

Before tests of significance were completed, variables were grouped according to the test data and variables concerning family, self, and occupation (see Appendix B). The test data were divided into three groups: Group 1, the Kuder Inventory Group included Variables 11 to 20; Group 2, the Guilford-Zimmerman Group included variables 21 to 30; and Group 3, the Davis Reading Test Group included variables 31 and 32. The Family Group (Group 4) included variables 39 to 43, 47, 55 to 71, and 84 to 87. A further subdivision of this group, the Home Group (Group 5), included variables 40, 42, 47, 55 to 60, and 68 to 71. The Self Group (Group 6) included variables 33, 36, 38, 48, 51, 52, and 78 to 83. The Occupations Group (Group 7) included variables 37, 44 to 46, 53, and 72 to 77.

Each group of variables was dropped from the full model in order to determine which groups were significantly related to capabilities. Group 3 was significant at the 5 percent level (see Appendix D); Groups 2 and 6 were significant at the 10 percent level.

Significance of Individual Variables

Each variable was dropped singly to determine which individual variables were significantly related to capabilities. Variables 32 (reading speed), 51 (age) and 88-89 (race) were significant at the 5 percent level (see Appendix D); variables 31 (reading comprehension) and 78 to 83 (student's estimate of his ability for his chosen occupation) were significant at the 10 percent level.

Reading Comprehension

Reading comprehension, as measured by the Davis Reading Test, was not significant at the 5 percent level (it was at the 10 percent level); however this variable was included in the final model because the score is secured at the same time that reading speed is determined. Reading comprehension had a mean score of 12 and a standard deviation of 8.14. The score of 12 had a percentile rank of 29 on the Davis Reading Test norms, which would indicate that the reading comprehension of this group

Table 7. Reading Comprehension: Number and Percent of Students Scoring in Specified Score Groups on the Reading Comprehension Test and the Capability Index

Reading comprehension score	Capability index score					Total
	0 to 14	15 to 29	30 to 44	45 to 59	60 to 74	
			Number			
0 to 8	53	8	1			62
9 to 17	23	25	8	2		58
18 to 26	4	19	7	3	4	37
27 to 35		4	2		2	8
Total	80	56	18	5	6	165
			Percent[1]			
0 to 8	85	13	2			100
9 to 17	40	43	14	3		100
18 to 26	11	51	19	8	11	100
27 to 35		50	25		25	100
Total	48	34	11	3	4	100

[1]Percentages are rounded to the nearest whole percent.

was considerably below average for senior boys. Reading comprehension had a correlation of .67 with the capabilities score. This variable had a high correlation (.92) with reading speed and a moderate correlation (.45) with grade point average.

The probability of obtaining a certain capability score with a given reading comprehension score is presented in Table 7. For example, of the 62 students who scored in the 0 to 8 range on the reading comprehension scale, 85 percent (53) scored in the 0 to 14 range on the capability index, 13 percent (8) scored in the 15 to 29 range, and 2 percent (1) scored in the 30 to 44 range.

Reading Speed

Reading speed, as measured by the Davis Reading Test, had a mean score of 18 and a standard deviation of 14.12. A score of 18 ranks at the 36th percentile on normative data for this test. This indicates that the reading speed, like reading comprehension, was below average for senior boys.

Reading speed had a correlation of .79 with the capabilities score. This indicates that as reading speed increases, the capabilities score increases also. Reading speed had a lower correlation with grade point average (.47), years of education and training (.38), and social-class value orientation inventory (.36).

Table 8. Reading Speed: Number and Percent of Students Scoring in Specified Score Groups on the Reading Speed Test and on the Capability Index

Reading speed score	Capability index score					Total
	0 to 14	15 to 29	30 to 44	45 to 59	60 to 74	
			Number			
0 to 14	62	14	1			77
15 to 29	16	29	8	1		54
30 to 44	2	12	9	3		26
45 to 59		1		1	5	7
60 to 74					1	1
75 to 80						
Total	80	56	18	5	6	165
			Percent[1]			
0 to 14	81	18	1			100
15 to 29	29	54	15	2		100
30 to 44	8	46	35	11		100
45 to 59		14		14	72	100
60 to 74					100	100
75 to 80						
Total	48	34	11	3	4	100

[1]Percentages are rounded to the nearest whole percent.

The probability of obtaining a certain capability score with a given reading speed score is presented in Table 8. For example, of the 77 students who scored in the 0 to 14 range on the reading speed test, 81 percent (62) scored in the 0 to 14 range on the capability index, 18 percent (14) scored in the 15 to 29 range, and 1 percent (1) scored in the 30 to 44 range.

Student's Estimate of His Ability

The student's estimate of his ability for his chosen occupation was a discrete variable with the following categories and correlations with capabilities:

No choice	—.145
Below average	—.014
Somewhat below average	—.094
Average	—.201
Somewhat above average	.345
Very much above average	—.072

This would indicate that a person who feels that he is somewhat above average in ability for his chosen occupation has a better understanding of his capabilities than one who places himself in the other categories indicated. It is likely that the person who feels he is just average in ability for his chosen occupation does

Table 9. Student's Estimate of His Ability: Number and Percent of Students According to Their Estimate of Their Ability for Their Chosen Occupation and Their Score on the Capability Index

Students' estimate of their ability for chosen occupations	Capability index score					
	0 to 14	15 to 29	30 to 44	45 to 59	60 to 74	Total
			Number			
No response	12	11	1			24
Very much below average		1				1
Somewhat below average	4	1				5
Average	27	14	6			47
Somewhat above average	33	27	11	5	6	82
Very much above average	4	2				6
Total	80	56	18	5	6	165
			Percent[1]			
No response	50	46	4			100
Very much below average		100				100
Somewhat below average	80	20				100
Average	57	30	13			100
Somewhat above average	40	33	14	6	7	100
Very much above average	67	33				100
Total	48	34	11	3	4	100

[1]Percentages are rounded to the nearest whole percent.

not have the proper understanding of the needs of the occupation nor of his ability for it.

The probability of obtaining a certain score on the capability index with a given estimate of the student's ability for his chosen occupation is presented in Table 9. For example, of the 47 students who estimated their ability as average, 57 percent (27) scored in the 0 to 14 range on the capability index, 30 percent (14) scored in the 15 to 29 range, and 13 percent (6) scored in the 30 to 44 range.

Age

Age in months had a mean of 218 (18.16 years) and a standard deviation of 7.42. This variable had a correlation of —.31 with the capabilities score. This would indicate that a person who is above the average age for his class would have lower capabilities according to this capabilities index. However, since this relationship is not strong it may indicate that other factors are involved such as promotional policies of the school, attendance of the student, and demands upon the student.

The probability of obtaining a certain capability level with a given age is presented in Table 10. For example, of the 104 students who were in the 215 to 234 months range, 53 percent (55) scored in the 0 to 14 range on the capability index, 31 percent (32) scored in the 15 to 29 range, 10 percent (11) scored in the 30 to 44 range, 2 percent (2) scored in the 45 to 59 range, and 4 percent (4) scored in the 60 to 74 range.

Table 10. Age: Number and Percent of Students of Certain Age Groups (in Months) Scoring in Specified Groups on the Capability Index

	Capability index score					
Age (months)	0 to 14	15 to 29	30 to 44	45 to 59	60 to 74	Total
			Number			
175 to 194		1				1
195 to 214	22	23	7	3	2	57
215 to 234	55	32	11	2	4	104
235 to 254	3					3
Total	80	56	18	5	6	165
			Percent[1]			
175 to 194		100				100
195 to 214	39	40	12	5	4	100
215 to 234	53	31	10	2	4	100
235 to 254	100					100
Total	48	34	11	3	4	100

[1]Percentages are rounded to the nearest whole percent.

Race

Tumin (45) reported that three conditions had to be met before claims could be made concerning racial differences in intelligence. These conditions are:

1. The distinctive genetic or "racial" homogeneity of the Negro group being tested, as well as that of the white group being tested, must be demonstrated, not assumed.

2. The social and cultural backgrounds of the Negroes and whites being tested or otherwise being measured must be fully equal.

3. Adequate tests of native intelligence and other mental and psychological capacities, with proven reliability and validity, must be used.

Since none of these conditions were met in this study, no effort is made here to measure racial differences in intelligence or capabilities. In fact the relative capability scores in this study probably point to lack of uniformity in these three conditions among the racial groups.

The probability of obtaining a certain capability score with either the white or Negro student is presented in Table 11. For example, of the 44 Negro students, 89 percent (39) scored in the 0 to 14 range on the capability index, 9 percent (4) scored in the 15 to 29 range, and 2 percent (1) scored in the 30 to 44 range.

Table 11. Race: Number and Percent of Students of the White and Negro Races Scoring in Specified Groups on the Capability Index

	Capability index score					
Race	0 to 14	15 to 29	30 to 44	45 to 59	60 to 74	Total
			Number			
White	41	52	17	5	6	121
Negro	39	4	1			44
Total	80	56	18	5	6	165
			Percent[1]			
White	34	43	14	4	5	100
Negro	89	9	2			100
Total	48	34	11	3	4	100

[1]Percentages are rounded to the nearest whole percent.

Summary

This section has presented the results of the regression of the capability scores on selected variables. The following variables

were found significantly related to capability score: reading speed, student's estimate of his ability for his chosen occupation, age, and race. The following groups of variables were found significant: the Guilford-Zimmerman Group, the Davis Reading Group, and the Self Group.

ANALYSIS OF THE DISCREPANCY BETWEEN ASPIRATIONS AND CAPABILITIES, AND RELATIONSHIP OF STUDENTS' PLANS TO LABOR MARKET REQUIREMENTS

Discrepancy Scores

As indicated previously, the differences between aspirations and capabilities of the youths were expressed as discrepancy scores. These discrepancy scores were computed by subtracting the aspiration scores from the respective capability scores and adding 100 to the result, thus eliminating negative scores. Students with discrepancy scores under 100 appear to be over-aspiring relative to their capabilities while those with scores over 100 appear to under-aspire. The regression of these discrepancy scores on the variables under investigation was used to determine which variables are related to the discrepancy scores, and which groups of variables are related to the discrepancy scores.

Significance of Groups of Variables

The groupings of variables used in the discrepancy analysis were the same as those used in the capabilities analysis (see page 17). Each group of variables was dropped from the full model in order to determine which groups were significantly related to the discrepancy score. The Davis Reading Group, which included both speed and comprehension scores, was significant at the 5 percent level (see Appendix E).

Significance of Individual Variables

Each variable was dropped singly to determine which variables are significantly related to the discrepancy scores. Variable 32 (reading speed) was significantly related at the 5 percent level (see Appendix E). Variables 23 (ascendance) and 24 (sociability) were significantly related at the 10 percent level.

Reading Speed

Reading speed, one of the scales of the Davis Reading Test, was the only variable significantly related to the discrepancy score at the 5 percent level. Reading speed had a correlation of .48 with the discrepancy score. This relationship indicates that students with low reading scores tend to have low discrepancy scores—tend to over-aspire considerably for current capabilities. Students with high reading scores tend to have high discrepancy scores—scores above 100 indicate capabilities higher than aspirations.

The probability of obtaining a certain discrepancy score with a given reading speed score is presented in Table 12. Of the 26 students who scored in the 30 to 44 range on the reading speed test, 16 percent (4) scored in the 55 to 69 range on the discrepancy index, which indicates that capabilities are considerably lower than aspirations; 38 percent (10) scored in the 70 to 84 range on the discrepancy index, indicating that capabilities are somewhat lower than aspirations; 38 percent (10) scored in the 85 to 99 range, which indicates capabilities are lower, but not significantly lower, than aspirations, and 8 percent (2) scored in the 100 to 114 range, indicating that capabilities are higher, but not significantly higher, than aspirations.

Table 12. Reading Speed and Discrepancy Score: Number and Percent of Students Scoring in Specified Groups on the Reading Speed Test, with Their Discrepancy Scores

Reading speed score	Discrepancy score: 40 to 54	55 to 69	70 to 84	85 to 99	100 to 114	115 to 129	Total
				Number			
0 to 14	7	26	37	6	1		77
15 to 29	2	6	23	18	5		54
30 to 44		4	10	10	2		26
45 to 59			1		1	5	7
60 to 74							
75 to 80					1		1
Total	9	36	71	34	10	5	165
				Percent[1]			
0 to 14	9	34	48	8	1		100
15 to 29	4	11	43	33	9		100
30 to 44		16	38	38	8		100
45 to 59			14		14	72	100
60 to 74							
75 to 80					100		100
Total	5	22	43	21	6	3	100

[1]Percentages are rounded to the nearest whole percent.

Ascendance

Ascendance, one of the scales on the Guilford-Zimmerman Temperament Survey, was discussed previously under Occupational Aspirations Analysis. This variable was negatively correlated with the discrepancy score.

The probability of obtaining a certain discrepancy score with a given ascendance score is presented in Table 13. Of the 77 students who scored in the 12 to 17 range on the ascendance scale, 4 percent (3) scored in the 40 to 54 range on the discrepancy index indicating capabilities much lower than aspirations; 29 percent (22) scored in the 55 to 69 range indicating capabilities considerably lower than aspirations; 41 percent (32) scored in the 70 to 84 range which indicates capabilities somewhat lower than aspirations; 18 percent (14) scored in the 85 to 99 range which indicates capabilities are lower, but not significantly lower, than aspirations; 4 percent (3) scored in the 100 to 114 range, indicating that capabilities are higher, but not significantly higher, than aspirations; and 4 percent (3) scored in the 115 to 129 range, indicating capabilities significantly higher than aspirations.

Table 13. Ascendance and Discrepancy Score: Number and Percent of Students Scoring in Specified Score Groups on the Ascendance Scale, with Their Discrepancy Scores

Ascendance score	Discrepancy score: 40 to 54	55 to 69	70 to 84	85 to 99	100 to 114	115 to 129	Total
				Number			
0 to 5				3	1		4
6 to 11		5	14	8	2		29
12 to 17	3	22	32	14	3	3	77
18 to 23	5	8	24	9	4	2	52
24 to 30	1	1	1				3
Total	9	36	71	34	10	5	165
				Percent[1]			
0 to 5				75	25		100
6 to 11		17	48	28	7		100
12 to 17	4	29	41	18	4	4	100
18 to 23	10	15	46	17	8	4	100
24 to 30	33	33	34				100
Total	5	22	43	21	6	3	100

[1]Percentages are rounded to the nearest whole percent.

Sociability

Sociability, another of the scales on the Guilford-Zimmerman Temperament Survey, involves having many acquaintances and friends, entering into conversations, liking social activities, seeking social contacts, and seeking limelight as opposed to the opposite of these qualities. Sociability had a mean score of 19 and a standard deviation of 5.68. The mean score would rank at the 50th centile on the norms of the Guilford-Zimmerman, which is almost average for the norm group. This variable was negatively correlated with the discrepancy score.

The probability of obtaining a certain discrepancy score with a given sociability score is presented in Table 14. Of the 38 students who scored in the 12 to 17 range on the sociability scale, 3 percent (1) scored in the 40 to 54 range on the discrepancy index which indicates a wide discrepancy between aspirations and capabilities; 34 percent (13) scored in the 55 to 69 range, indicating capabilities considerably lower than aspirations; 39 percent (15) scored in the 70 to 84 range, indicating a smaller discrepancy; 13 percent (5) scored in the 85 to 99 range, indicating capabilities lower, but not significantly lower, than aspirations; and 11 percent (4) scored in the 100 to 114 range which indicates that capabilities are higher, but not significantly higher, than aspirations.

Table 14. Sociability and Discrepancy Score: Number and Percent of Students Scoring in Specified Score Groups on the Sociability Scale, with Their Discrepancy Scores

Sociability score	Discrepancy score						
	40 to 54	55 to 69	70 to 84	85 to 99	100 to 114	115 to 129	Total
				Number			
0 to 5		1			1		2
6 to 11		1	8	3			12
12 to 17	1	13	15	5	4		38
18 to 23	2	17	27	20	2	2	70
24 to 30	6	4	21	6	3	3	43
Total	9	36	71	34	10	5	165
				Percent[1]			
0 to 5		50			50		100
6 to 11		8	67	25			100
12 to 17	3	34	39	13	11		100
18 to 23	3	24	39	28	3	3	100
24 to 30	14	9	49	14	7	7	100
Total	5	22	43	21	6	3	100

[1]Percentages are rounded to the nearest whole percent.

Relationship of the OAS and Capability Score, and the Discrepancy Score

The relationship between the OAS and the Capability Score, and the Discrepancy Score, are presented in a scatter diagram (Figure 1). The aspiration level of this sample appears to be similar to the findings of Haller and Miller (16). The OAS scores ranged from 14 to 68 on the 72-point scale and had a mean score

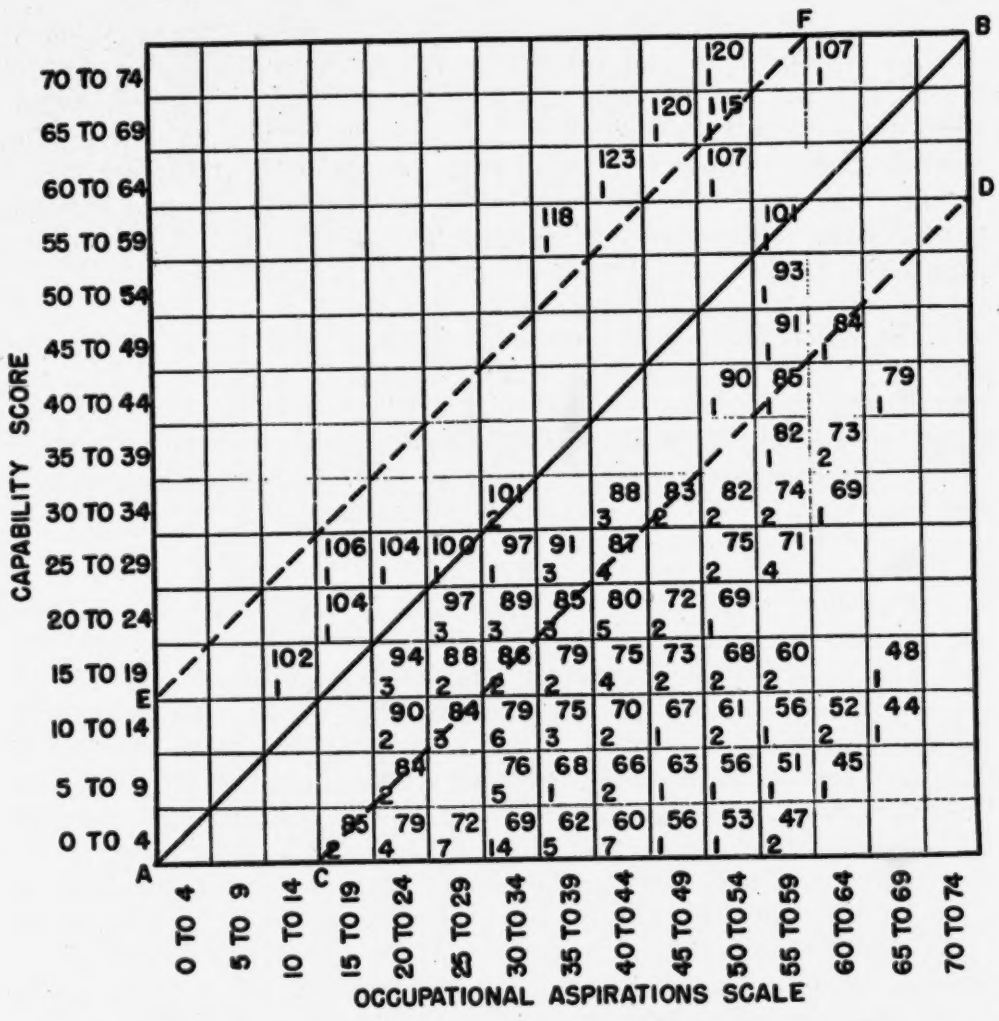

Figure 1. Scatter Diagram Showing Relationship between Capability Scores and Aspirations, with Resulting Discrepancies

The number in the lower half of each cell is the frequency; the number in the upper half is the average discrepancy score for that cell. A score of 100 indicates no difference between occupational aspirations and capabilities. Discrepancy scores below 100 (line AB) indicate aspirations higher than capabilities; scores above 100 (line AB) indicate capabilities above aspirations.

of 40 and standard deviation of 12. The Lenawee County (Michigan) sample of Haller and Miller had a mean score of 36 and a standard deviation of 13. Their Mason (Michigan) sample had a mean score of 37 and a standard deviation of 12. The OAS had a correlation coefficient of .41 with the capabilities score. Literature has indicated that aspiration level is positively associated with intelligence and aptitudes. The OAS had correlations of .42 with general intelligence, .41 with verbal aptitude, and .40 with numerical aptitude. However, these variables were not significantly related to OAS when included in the regression analysis.

Since the capability score was equated with the OAS score and since the mean capabilities score, 18, is considerably below the mean OAS score, 40, it can be concluded that the aspiration level was generally higher than the capability level, as determined in this study. This factor should be considered in determining further education and training programs for high school seniors in this area. These programs should concentrate on upgrading capability levels.

The discrepancy score shown in Figure 1 is the average discrepancy score for the frequencies shown in each cell. For example, the cell frequency of 14 for interval 0 to 4 (capability score) and interval 30 to 34 (OAS) had a mean discrepancy score of 69. The discrepancy score range for the 14 observations in this cell was from 66 to 73. The discrepancy scores in the study had a mean of 77 and a standard deviation of 15.

Discrepancy scores above line AB indicate that capabilities are higher than aspirations. Discrepancy scores on line AB, 100, indicate no difference between the OAS and capabilities. Discrepancy scores below line AB indicate that aspirations are higher than capabilities. Students with discrepancy scores below 85 (1 standard deviation below the no discrepancy score of 100, line CD) probably need counseling to help reduce the discrepancy between their aspirations and capabilities. Students with discrepancy scores above 115 (1 standard deviation above the no discrepancy score of 100, line EF) also probably need counseling to help bring their aspiration level in line with their capability level. Such discrepancies are most serious for under-aspirants and for those over-aspirants who planned no further education or training after high school.

Higher mean discrepancy scores, which in this study meant more nearly congruent aspirations and capabilities, were found in the larger of the study schools. The incidence of these higher scores may be attributable to the functioning of the guidance and

counseling programs in these larger schools and their more nearly adequate basic curricula.

The realistic expression level of the occupational aspirations might be construed as more nearly approximating occupational expectations than the total OAS score.[8] The realistic subset (adjusted to represent a comparable scale) averaged 35 compared with the OAS mean of 40. The mean of the discrepancy scores based on the realistic subset was 83, while that based on the total OAS scores was 77.

Occupational Plans in Relation to Present and Projected Labor Market Requirements

The occupational plans of the students were grouped according to the United States Census occupational classification, and the percentages of students planning occupations in each classification were compared with the percentage of the working population in the U. S. employed in each classification in 1965 and with the projections for 1970 (Table 15).

The relative geographic mobility of the students warrant the use of the United States labor force distribution.[9] If regional data were available for 1965 and 1970 an even wider discrepancy be-

Table 15. Relationship of Student Occupational Plans to Present and Projected Labor Market Requirements for the United States

Occupation	1965 student plans	1965 employment[1]	1970, projected[1]
Professional, technical, and kindred workers	41.8	12.3	13.7
Managerial	5.5	10.1	10.3
Clerical	2.4	15.5	16.3
Sales workers	0.6	6.5	6.5
Craftsmen, foremen, and kindred workers	12.1	12.7	12.8
Operatives	3.0	18.6	17.5
Service workers	4.8	12.9	13.5
Laborers, except farm and mine	2.4	5.4	4.6
Farmers, farm managers, and farm laborers	6.7	6.0	4.8
None reported	20.6		

[1]From the United States Department of Labor, "Manpower Report of the President and a Report on Manpower Requirements, Resources, Utilization, and Training," March, 1966, pp. 43 and 165. Since the students anticipated an average of nearly 3 years of education and training after high school, the 1970 projections appropriately indicate the likely job situation at the time they complete the anticipated education and training.

[8]The OAS score represents scores for both idealistic and realistic expression levels.

[9]Ninety percent of the students indicated willingness to move to another state for a job after training.

tween occupational plans and projected regional requirements would be expected, particularly in the professional and technical category (32).

Approximately 41.8 percent of the students in this sample indicated plans for professional, technical, and kindred occupations. In 1965, 12.3 percent of the working population were employed in this category. Projections for 1970 indicate that 13.7 percent of the working population may be employed in professional, technical, and kindred occupations. This wide discrepancy between occupational plans and projected requirements, like the discrepancy between aspirations and capabilities, points out the need for more realistic occupational and educational information and for increased guidance services to help students choose their careers in line with expected requirements. (The 1965 student plans include senior boys only, while 1965 employment and 1970 projection figures include both males and females of working age.)

A smaller percentage of students indicated plans for most other categories than the projected labor market will require. Many of the students who chose professional, technical, and kindred occupations will seek employment in other classifications.

Projections for managerial occupations show little change in percentage, from 10.1 percent for 1965 to 10.3 percent for the 1970 projection. This classification was chosen by 5.5 percent of this sample.

Clerical occupations will probably increase from 15.5 percent for 1965 to 16.3 percent for 1970. Clerical occupations were chosen by 2.4 percent of this sample. Since more women than men enter this field, probably only a few students in this sample will change from the professional, technical, and kindred classification to clerical.

Only one person in this sample indicated that he had plans for a sales career. The 1970 projections show no expected increase from 6.5 percent for 1965. Many of the students who chose professional, technical, and kindred occupations probably will become established in sales occupations and work toward management positions.

The craftsmen, foremen, and kindred workers occupation was selected by 12.1 percent of this sample. Projections for 1970 (12.8) remain nearly the same as the 1965 employment percentage (12.7).

The operative category was chosen by 3 percent of the students in this sample. In 1965, 18.6 percent of the working population were employed in this category, and projections show a

decline to 17.5 percent for 1970. Persons with mechanical and manual interests and abilities who do not plan to finish college may find employment in the operative and in the craftsmen, foremen, and kindred groups. These groups usually involve vocational training and/or apprenticeships. Information concerning such training programs should be made available.

The laborers (excluding farm) classification was chosen by 2.4 percent of this sample. Employment figures for 1965 show that 5.4 percent of the workers were employed in this area. Projections indicate that 4.6 percent will be employed as laborers. Probably students with lower capabilities or aspirations will be competing for these jobs. Special training programs will be needed to help qualify some of these youths for participation in occupational training programs. Special occupational materials need to be designed for persons with low reading and aptitude levels.

The service workers classification was chosen by 4.8 percent of this sample. There were 12.9 percent of the working population employed in this category in 1965, and projections show a change to 13.5 by 1970. More students from this sample probably will be working in this classification than was indicated.

The farmers, farm managers, and farm laborers classification was chosen by 6.7 percent of this sample. In 1965, 6.0 percent of the work force was engaged in this activity. Projections show a decline to 4.8 percent by 1970.

About one-fifth (20.6 percent) of this sample had not chosen their occupation when these data were collected. The high percentage who chose professional, technical, and kindred occupations (41.8) indicates that many of the students will have to change their plans to other occupational classifications. More occupational and educational counseling is needed to help the students make these choices.

SUMMARY AND CONCLUSIONS

The purposes of this study were to determine the aspirations and capabilities of rural youth in selected low-income counties in Arkansas; to relate aspirations, capabilities, and the discrepancy between aspirations and capabilities to the experience background of the youths studied; and to relate the youths' occupational plans to present and projected laber market requirements. Tests, inventories, and a questionnaire were administered to 165 senior boys in the ten high schools in Little River and Sevier Counties.

The following tests and inventories were administered:

Occupational Aspiration Scale
General Aptitude Test Battery
Kuder Preference Record-Vocational
Guilford-Zimmerman Temperament Survey
Social Class Value Orientation Inventory
Rural-Urban Orientation Inventory
Davis Reading Test

Background information concerning the student, his parents, and his siblings was obtained from school records and a questionnaire.

Significant relationships between dependent and independent variables, ascertained through the use of multiple linear regression techniques, were shown in expectancy tables.

Conclusions from the study may be summarized as follows:

1. Five variables were found to be significantly related to occupational aspirations. These were mechanical interest, scientific interest, ascendance, social class value orientation, and the number of years of education and training planned after high school.

2. The information readily available from school records, and that which could be readily gathered by interview, was not significantly related to occupational aspirations. Test instruments providing information significantly related to the OAS scores were Kuder Preference Record-Vocational (mechanical and scientific interest scales), Guilford-Zimmerman Temperament Survey (ascendance scale), and the Social Class Value Orientation Inventory.

3. The level of occupational aspirations of the senior boys in these two low-income counties was similar to that of similar groups in high-income, more urban areas in Michigan.

One implicit hypothesis when the research began was that the basic school curriculum was essentially adequate, but should be tailored to develop the aspirations of the low-income subjects. A more appropriate hypothesis in light of this study would seem to be that the basic education is not adequate. While the students had aspirations similar to those of students in other areas, their reading skills were below national norms, disqualifying many from having capability scores matching their aspirations.

4. Five variables were found to be significantly related to capabilities. These were reading speed, age, and race (significant

at the 5 percent level) and reading comprehension and the student's estimate of his ability for his chosen occupation (significant at the 10 percent level).

The mean scores from the General Aptitude Test Pattern indicate that the students in the study were similar to the general population test norms for the test except in verbal aptitude and finger dexterity.

5. Reading speed, ascendance, and sociability were found to be significantly related to the discrepancy between aspirations and capabilities (ascendance and sociability were significant at the 10 percent level).

There is apparently little need for counseling and guidance to upgrade aspirations. Approximately 70 percent (116) of the students studied over-aspired significantly for their current capability levels. About 16 percent of these over-aspirants planned little or no further education and training after high school to upgrade their capabilities. Only 13 students had capability scores above aspiration scores; for only 4 of these was their capability score significantly higher than their respective aspiration score.

6. The incidence of higher mean discrepancy scores (in this study more nearly congruent aspirations and capabilities) in the larger of the schools may be attributable to the functioning of the guidance and counseling programs in these larger schools and their more nearly adequate basic school curricula. However, further investigation is needed to verify this conclusion.

7. Wide discrepancies were found between the occupational plans of the students and the projected U. S. needs for 1970 in some occupational categories. Nearly 42 percent of the students chose professional, technical, and kindred occupations, while the projected need for 1970 for these occupations is only about 14 percent of the work force. Agricultural occupations (farmers, farm managers, and farm laborers) were chosen by a slightly greater proportion of the students than the projected U. S. needs would warrant. However, with one-third of the students living on farms and the general prominence of agriculture in the region, the plans may be reasonable. The student plans in all other occupational categories were below projected national needs for 1970.

8. Education and training programs and occupational information services for placing participants in occupations providing adequate incomes should consider the following:

A. The inclusion of remedial and/or developmental read-

ing in both the elementary and secondary school curricula.

B. The development of an occupational information unit in each department in the high schools (for example, the business education department would place special emphasis on the occupations available in that field).

C. The establishment of guidance services, at least on a part-time basis, for those high schools without counselors.

D. The development of special training programs for students with low capabilities in an effort to qualify them for participation in the regular vocational training programs.

E. The collection and utilization of the following test and background information in the counseling of program participants: occupational aspirations, mechanical and scientific interests, ascendance traits, social class value orientation, reading speed, the number of years of education and training expected by the student after high school, the student's estimate of his ability for his chosen occupation, and his age.

LITERATURE CITED AND OTHER SELECTED REFERENCES

1. Acts of Arkansas. 60th General Assembly, Hurley Company, Camden, pp. 1067-1090, 1955.
2. Bishop, C. E. "Clarifying the problem." Proc. of the American Country Life Assn., Paul C. Johnson, editor. Prairie Farmer Publishing Co., Chicago, pp. 6-14, 1956.
3. Buros, Oscar K. (editor). The Fourth Mental Measurement Yearbook. Gryphon Press, Highland Park, N. J., 1953.
4. Buros, Oscar K. (editor). The Fifth Mental Measurement Yearbook. Gryphon Press, Highland Park, N. J., 1959.
5. Cronbach, Lee J. Essentials of Psychological Testing. Harper and Brothers, New York, N. Y., 1960.
6. Davis, Fredrick B. and Charlotte C. Davis. Manual-Davis Reading Test. The Psychological Corp., New York, N. Y., 1962.
7. Dynes, Russell R., Alfrede Clarke, and Simon Dinitz. "Levels of occupational aspiration: Some aspects of family experience as a variable." Amer. Sociol. Rev. 21:212-215, 1956.
8. Empey, Lamar T. "Social class and occupational aspirations: A comparison of absolute and relative measurement." Amer. Sociol. Rev. 21:703-709, 1956.
9. Ferguson, George A. Statistical Analysis in Psychology and Education. McGraw-Hill Book Co., New York, N. Y., 1959.
10. Fliegel, F. C. "Aspirations of low income farmers and their performance and potential for change." Rural Sociol. 24:205-214, Sept., 1959.
11. Griffin, Roscoe. "Appalachian newcomers in Cincinnati." In The Southern Appalachian Region: A Survey, edited by Thomas R. Ford. Univ. of Ky. Press, pp. 79-84, 1962.
12. Gist, Noel P. and C. D. Clark. "Intelligence as a selective factor in rural-urban migration." Amer. Jour. Sociol. 44:36-58, July, 1938.

13. Gist, Noel P., C. T. Pihlblad, and C. L. Gregory. "Selective aspects of rural migration." Rural Sociol. 6:3-15, March, 1941.

14. Guilford, J. P. and Wayne S. Zimmerman. Manual of Instruction and Intepretations—The Guilford-Zimmerman Temperament Survey. Sheridan Supply Co., Beverly Hills, Cal., 1947.

15. Haller, A. O. and C. O. Butterworth. "Peer influence on levels of occupational and educational aspirations." Social Forces 38:289-295, May, 1960.

16. Haller, A. O. and Irwin W. Miller. The Occupational Aspiration Scale: Theory, Structure, and Correlates. Mich. State Univ. Bul. 288, E. Lansing, 1963.

17. Holloway, Robert C. and Joel V. Berreman. "The educational and occupational aspirations of Negro and white male elementary school students." Pacific Sociol. Rev. 2:56-60, Fall, 1959.

18. Holtzclaw, Thelbert E. An Analysis of the Vocational Preferences of Seniors in the Negro Secondary Schools of Arkansas with Implications for Possible Curriculum Modifications. Unpublished Doctor's dissertation, University of Arkansas, 1955.

19. Hoppock, Robert. Occupational Information, Where To Get It and How To Use It in Counseling and Teaching. McGraw-Hill Book Co., New York, N. Y., 1963.

20. Hyman, Herbert H. "The value system of different classes: A social psychological contribution to the analysis of stratification." In Class Status and Power; A Reader in Social Stratification, edited by Reinhard Bendix and Seymour M. Lipset. The Free Press, Glencoe, Ill., pp. 426-442, 1953.

21. Johnson, D. Gale. "Comparability of labor capacities of farm and non-farm labor." Amer. Econ. Rev. 43:296-313, June, 1953.

22. Kaiser, Louis H. Factors Related to the Educational Aspiration Level of Selected Negro and White Secondary Students and Their Parents. Unpublished Doctor's dissertation, University of Arkansas, 1961.

23. Kuder, G. Frederic. Manual-The Kuder Preference Record-Vocational. Science Research Associates, Chicago, Ill., 1956.

24. Laurie, Walter A. "Estimating the level of vocational aspirations." Jour. of Social Psych. 10:467-472, November, 1939.

25. Lipset, Seymour M. "Social mobility and urbanization." Rural Sociol. 20:220-228, Sept.-Dec., 1956.

26. Little River Development Council. Overall Economic Development Program for Little River County, Arkansas. Little River Devel. Council, Ashdown, April, 1962, rev. June, 1963 (mimeographed).

27. March, William A. The Occupational Aspiration Scale and Intelligence. Unpublished Master's thesis, Ohio State University, Columbus, 1964.

28. Martin, Lee R. How Do Southern Incomes Compare. Paper distributed at Seminar for Southern Agricultural Leaders, The Agricultural Policy Institute, No. Car. State College, Raleigh, Jan. 23, 1961.

29. Mauldin, W. Parker. "Selective migration from small-town." Amer. Sociol. Rev. 5:748-758, October, 1940.

30. Mosser, Helen P., William Dubin, and Irvin M. Shelsky. "A proposed modification of the Roe Occupational Classification." Jour. of Counseling Psych. 3:27-31, Spring, 1956.

31. National Opinion Research Center. "Jobs and occupations: A popular evaluation." In Class Staus and Power, edited by Reinhard Bendix and Seymour M. Lipset. The Free Press, Glencoe, Ill., pp. 411-426, 1953.

32. Outdoor Recreation Resources Review Commission. Projections to the years 1976 and 2000: Economic Growth, Population, Labor Force

and Leisure, and Transportation. ORRRC Study Report 23, Washington, D. C., 1962.

33. Patterson, Donald C., C. d'A. Gerken, and Milton E. Hahn. Revised Minnesota Occupational Rating Scales. Minnesota Studies in Student Personnel Work No 2, Univ. of Minn. Press, Minneapolis, 1953.
34. Pihlblad, C. T. and C. L. Gregory. "Selective aspects of migration among Missouri high school graduates." Amer. Sociol. Rev. 19:314-324, June, 1954.
35. Riccio, Anthony C. "The occupational aspirations of migrant adolescents from the Appalachian South." Vocational Guidance Quar. 14:26-30, Autumn, 1965.
36. Rogers, Oscar A. Factors Related to the Educational Aspiration Level of Selected Negro and White Secondary Students and Their Parents. Unpublished Doctor's dissertation, University of Arkansas, 1960.
37. Rude, Neil and Donald King. "Aptitude levels in a depressed area." Personnel and Guidance Jour. 53:785-789, April, 1965.
38. Sevier County Developmental Council. Provisional Overall Development Program for Sevier County, Arkansas. Sevier County Devel. Council, DeQueen, Nov. 1962 (mimeographed).
39. Snedecor, George W. Statistical Methods. The Iowa State Univ. Press, Ames, 1962.
40. State Dept. of Education. Report on House Concurrent Resolution No. 58 of 1961 Arkansas General Assembly. Ark. State Dept. Educ., Little Rock, January, 1965.
41. Stubbins, Joseph. "The relationship between level of vocational aspirations and certain personal data: A study of some traits and influence bearing on the prestige level of vocational choice." Psychol. Monograph 41:327-408, May, 1950.
42. Sudduth, Durward L. The Relationship of Occupational Aspirations to Scholastic Achievement and Curricular Programs. Unpublished Master's thesis, Ohio State Univ., Columbus, 1964.
43. Sutker, Solomon. Memorandum on Editing, Scoring, and Coding for Key Punching—Social Class Value Orientation Inventory, 1964. On file in Dept. of Agr. Econ., Univ. of Arkansas, March, 1965.
44. Sutker, Solomon. Memorandum on Editing, Scoring, and Coding for Key Punching—Rural-Urban Orientation Inventory, 1965. On file in Dept. of Agr. Econ., Univ. of Arkansas, March, 1965.
45. Tumin, Melvin M. (editor). Race and Intelligence. Anti-Defamation League of B'nai B'rith, New York, N. Y., 1963.
46. United States Bureau of the Census. Eighteenth Census of the United States, 1960. Characteristics of the Population, Vol. I, Part V, Arkansas. Govt. Printing Office, Washington, D. C., 1963.
47. United States Department of Labor, Bureau of Employment Security. Estimates of Worker Trait Requirements for 4000 Jobs as Defined in the Dictionary of Occupational Titles. Govt. Printing Office, Washington, D. C., 1957.
48. United States Department of Labor, Bureau of Employment Security. Guide to the Use of the General Aptitude Test Battery, Section III. Govt. Printing Office, Washington, D. C., 1962.
49. United States Department of Labor. Manpower Report of the President and a Report on Manpower Requirements, Resources, Utilization, and Training. Govt. Printing Office, Washington, D. C., March, 1966.
50. Waters, E. Worthington. "Vocational aspiration, intelligence, problems, and socio-economic status of rural Negro high school seniors on the Eastern Shore of Maryland: Their implications for guidance." Jour. Negro Educ. 23:502-505, Fall, 1954.

51. Werner, Max and Walter Murray. "Another look at the culturally deprived and their level of aspiration." Jour. Educ. Sociol. 36:319-321, May, 1963.

52. Wren, Harold A. Vocational Aspiration Level of Adults. Bureau of Publications, Teachers College, Columbia University, N. Y., 1942.

APPENDIX A

Questionnaire Used Showing Number and Percent of Responses

Schedule Number_____

THE OCCUPATIONAL PLANS OF HIGH SCHOOL YOUTH[1]

Student:

This survey is an attempt to get a better picture of the problems you young people face in choosing your life's work and the attitudes you have toward these problems. By carefully filling out this questionnaire you will help us gain a better knowledge of how these problems look from where you stand. This information will be of great value in developing counseling, education, and training programs for high school youth. For this reason we are anxious to have you answer the questions on this form to the best of your ability.

PLEASE FOLLOW THE DIRECTIONS:

1. Read each item carefully. Answer to the best of your knowledge.
2. BE SURE TO ANSWER EACH QUESTION. Where there are brackets, fill in an "X". Be sure that your "X" is squarely in the proper bracket before your choice. Where only a space is left, enter the words or figures called for.
3. There are several questions which refer to parents. If for any reason you are not living with your parents, answer for the person who acts as your parent or guardian.
4. If you have any comment to make, if you do not understand any item, if your attitudes differ from those given, or if you have problems which we failed to mention, write about them on the margin close to the items near them in meaning.

I. ABOUT MYSELF

1. MY NAME IS:_____.
2. MY MAILING ADDRESS IS:_____.
3. THE NAME OF MY HIGH SCHOOL IS:_____.
4. THE NUMBER OF YEARS I HAVE ATTENDED THIS HIGH SCHOOL IS:_____.

Transferred[1]		All 4 years[1]	
19	11.5	146	88.5

5. MY AGE (to the nearest birthday) IS:_____,

   AND THE DATE OF MY BIRTH WAS _____ _____ _____.
   Month Day Year

[1]From here on, the first number shown is the number who responded in this way to the question, and the second number is the percent of all responses.

6. I MAKE MY REGULAR HOME WITH:

( ) my own parents.	129	78.2
( ) a parent and a step-parent.	12	7.3
( ) one parent only.	10	6.1
( ) my grandparents.	6	3.6
( ) an uncle or aunt.	5	3.0
( ) other (specify). _____	3	1.8

7. NUMBER OF **SEMESTERS** OF EXTRA CURRICULAR ACTIVITIES IN WHICH I HAVE ACTIVELY PARTICIPATED ARE: (Check the ones in which you participate regularly and add to the list if necessary.) 1 year = 2 semesters.

( ) athletics	( ) National Honor Society	( ) student council
( ) band		( ) science club
( ) chorus	( ) 4-H, FFA, or NFA	( ) FTA
( ) library	( ) school paper	( ) Business Club
( ) _____	( ) annual	( ) _____
	( ) _____	

8. NUMBER OF **SEMESTERS** OF THE FOLLOWING HIGH SCHOOL SUBJECTS I HAVE STUDIED ARE: (Add other vocational subjects if necessary.)

( ) business education	( ) music
( ) vocational agriculture	( ) other _____
( ) industrial arts	

9. I LIVE:

( ) on a farm	55	33.3
( ) in the open country but not on a farm.	35	21.2
( ) in a village of under 2,500.	19	11.5
( ) in a town of 2,500-10,000.	56	34.0

10. OF ALL THE MEN I KNOW WELL, THE ONE I ADMIRE MOST IS:
HIS NAME:_____.
HIS OCCUPATION (job title):_____.
HIS RELATIONSHIP TO ME (friend, relative, teacher, minister, etc.):
_____.

II. ABOUT MY CHOICE OF A LIFE'S OCCUPATION

1. THE OCCUPATIONS WHICH I HAVE THOUGHT ABOUT GOING INTO ARE:
1. _____ 2. _____

2. THE OCCUPATION THAT I PLAN TO FOLLOW IS: (Indicate a particular type of job.) _____

3. AS TO MY KNOWLEDGE OF THE WORK I INTEND TO ENTER:

( ) I have good knowledge because I have worked at it.	34	20.6
( ) I have good knowledge because I have relatives or friends who work at it.	17	10.3
( ) I have a general knowledge, but I don't know much about the details of it.	44	26.7
( ) I don't know much about it yet, but I will find out by experience on the job.	15	9.1
( ) I don't know much about it yet, but I will find out when I go on to school.	34	20.6
( ) I don't know because I have not yet made a choice.	21	12.7

4. FOR THE OCCUPATION I HAVE CHOSEN I THINK MY ABILITY IS:

( ) very much above the average.	6	3.6
( ) somewhat above the average.	82	49.7
( ) just average.	47	28.5
( ) somewhat below average.	5	3.0
( ) very much below average.	1	.6
( ) I don't know because I have not yet made a choice.	24	14.6

5. IN THE OCCUPATION I HAVE CHOSEN I CAN EXPECT HELP IN GETTING STARTED:

( ) from my father or mother who is in this type of work.	30	18.2
( ) from relatives who are in this type of work.	18	10.9
( ) from friends who are in this type of work.	44	26.7
( ) from no one.	41	24.8
( ) I don't know because I have not yet made a choice	32	19.4

6. IF I WERE ABSOLUTELY FREE TO GO INTO ANY KIND OF WORK I WANTED, MY CHOICE WOULD BE: _____ _____.

7. THE TYPE OF WORK I WOULD LIKE TO BE DOING WHEN I AM 30 YEARS OLD IS: _____.

8. THE NUMBER OF YEARS TRAINING AND EDUCATION I PLAN TO GET AFTER HIGH SCHOOL IS:

( ) none.	18	10.9
( ) less than 1 year.	6	3.6
( ) 1 year.	8	4.9
( ) 2 years.	30	18.2
( ) 3 years.	3	1.8
( ) 4 years.	66	40.0
( ) 5 years or more.	31	18.8
no response[2]	3	1.8

9. I WOULD BE WILLING TO MOVE TO ANOTHER STATE (other than Texarkana, Texas) AFTER TRAINING IN ORDER TO GET A JOB:

( ) yes.	150	90.9
( ) no.	10	6.1
no response.	5	3.0

10. THE NAME AND LOCATION OF THE SCHOOLS I AM THINKING ABOUT ATTENDING ARE:

Name of school	Location of school
1. _____	_____
2. _____	_____

11. THE COURSES OF STUDY I AM THINKING ABOUT TAKING ARE:
1. _____.
2. _____.

III. ABOUT MY PARENTS

1. MY FATHER'S OCCUPATION IS: (If living with step-father, grandfather, or other male, tell his occupation.) (Specify the kind of work he does).
_____.

[2]No response to questionnaire statement.

2. MY MOTHER:

( ) has no job outside the home.	110	66.7
( ) has a part-time job outside the home.	16	9.7
( ) has a full-time job outside the home.	38	23.0
no response.	1	.6

HER JOB IS: _____

3. IF FATHER IS A FARMER HE IS:
( ) owner ( ) renter ( ) laborer
IF OWNER, HOW MANY ACRES DOES HE OWN?
CROPLAND _____ TOTAL _____
IF RENTER, HOW MANY ACRES DOES HE RENT?
CROPLAND _____ TOTAL _____

4. MY FATHER'S EDUCATION CONSISTED OF:

( ) 5 grades or less.	23	13.9
( ) 6-8 grades.	46	27.9
( ) 9-11 grades.	26	15.7
( ) 12 grades.	37	22.4
( ) above 12 grades.	15	9.1
( ) college degree.	9	5.5
no response.	9	5.5

5. WHERE DID YOUR FATHER LIVE (mostly) DURING THE FIRST FIVE YEARS OF HIS LIFE?

( ) on a farm.	113	68.5
( ) in the open country but not on a farm.	15	9.1
( ) in a village of under 2,500 population.	13	7.9
( ) in a town of 2,500-9,999 population.	3	1.8
( ) in a city of 10,000 to 50,000 population.	4	2.4
( ) in a city of over 50,000 population.	0	0
( ) I don't know.	17	10.3

6. MY MOTHER'S EDUCATION CONSISTED OF:

( ) 5 grades or less.	6	3.6
( ) 6-8 grades.	32	19.4
( ) 9-11 grades.	39	23.6
( ) 12 grades.	56	33.9
( ) above 12 grades.	16	9.7
( ) college degree.	8	4.9
no response.	8	4.9

7. WHERE DID YOUR MOTHER LIVE (mostly) DURING THE FIRST FIVE YEARS OF HER LIFE?

( ) on a farm.	100	60.6
( ) in the open country but not on a farm.	15	9.1
( ) in a village of under 2,500 population.	23	13.9
( ) in a town of 2,500-9,999 population.	7	4.3
( ) in a city of 10,000 to 50,000 population.	3	1.8
( ) in a city of over 50,000 population.	1	.6
( ) I don't know.	16	9.7

8. COMPARED WITH THE INCOME OF THE FAMILIES IN THIS AREA, THE INCOME OF MY PARENTS IS:

( ) one of the highest incomes.	7	4.2
( ) higher than average.	43	26.1
( ) just average.	100	60.6
( ) less than average.	12	7.3
( ) one of the lowest incomes.	2	1.2
no response.	1	.6

IV. ABOUT ME AND MY PARENTS

1. AS TO THE KIND OF JOB I GO INTO, MY PARENTS:

( ) want me to have a very important job.	53	32.1

( ) want me to have a job that is quite a bit better than most jobs around here.	59	35.8
( ) want me to have a job that is a little bit better than most jobs around here.	25	15.1
( ) feel that the job I take should be as good as most jobs around here.	16	9.7
( ) do not care how good the job I go into is.	9	5.5
no response.	3	1.8

2. AS TO ANY FURTHER HELP FROM MY FOLKS IN GETTING A START OR IN CONTINUING MY EDUCATION AND TRAINING AFTER HIGH SCHOOL, MY PARENTS WOULD BE:

( ) financially able to help me a great deal.	34	20.6
( ) financially able to give me some help.	99	60.0
( ) financially able to give me no help.	30	18.2
no response.	2	1.2

V. ABOUT MY BROTHERS AND SISTERS

1. BELOW IS THE NAME, SEX, AGE, HIGHEST GRADE COMPLETED IN SCHOOL, OCCUPATION, AND PLACE OF RESIDENCE OF MY BROTHERS AND SISTERS: (Start with the oldest brother or sister and include all brothers and sisters.) If in school, put "student" under occupation. If sister is married and not working outside the home, put "housewife".

	Name	Male or Female	Age	Highest Grade	Occupation	Place of Residence (town and state)
1.						
2.						
3.						
4.						
5.						
6.						
7.						
8.						

Educational status of eldest sibling

No response.	7	4.2
No sibling.	14	8.5
Younger sibling.	41	24.9
Older sibling—didn't finish high school.	5	3.0
Older sibling—completed high school.	51	30.9
Older sibling—attended college.	32	19.4
Older sibling—completed college.	15	9.1

VI. ABOUT MY HOUSE

1. OUR HOME IS:

( ) owned.	143	86.7
( ) rented.	20	12.1
no response.	2	1.2

2. THE NUMBER OF PERSONS WHO LIVE AT OUR HOUSE IS: ____

3. THE NUMBER OF ROOMS IN OUR HOUSE IS: _____
(Do not include basements, bathrooms, porches, closets, and halls.)

4. THE CONSTRUCTION OF OUR HOUSE IS:

( ) brick.	16	9.7
( ) unpainted frame.	18	10.9
( ) painted frame.	107	64.9
( ) other. (Specify) _____	23	13.9
no response.	1	.6

5. THE LIGHTING IN OUR HOUSE IS:

( ) oil lamps.	2	1.2
( ) electric.	163	98.8

( ) gas, mantel, or pressure lamps.
( ) other. (Specify) _____.

6. THE KIND OF REFRIGERATOR WE HAVE IS:		
( ) ice.	6	3.6
( ) gas or electric.	158	95.8
( ) none.	1	.6
7. WE HAVE A DEEP FREEZE LOCKER AT OUR HOME:		
( ) yes.	93	56.0
( ) no.	71	43.4
no response.	1	.6
8. WE HAVE RUNNING WATER IN OUR HOME:		
( ) yes.	126	76.0
( ) no.	39	24.0
9. WE TAKE A DAILY NEWSPAPER:		
( ) yes.	99	60.0
( ) no.	65	39.4
no response.	1	.6
10. WE HAVE A RADIO:		
( ) yes.	156	94.5
( ) no.	9	5.5
11. WE HAVE A TELEVISION SET:		
( ) yes.	155	93.9
( ) no.	8	4.9
no response.	2	1.2
12. WE HAVE A CAR (other than a truck):		
( ) yes.	137	83.0
( ) no.	28	17.0
13. WE HAVE A TELEPHONE:		
( ) yes.	103	62.4
( ) no.	62	37.6
14. WE HAVE A POWER WASHING MACHINE:		
( ) yes.	136	82.4
( ) no.	29	17.6
15. MY FATHER GOES TO CHURCH AT LEAST ONCE A MONTH:		
( ) yes.	86	52.1
( ) no.	67	40.6
no response.	12	7.3
16. MY MOTHER GOES TO CHURCH AT LEAST ONCE A MONTH:		
( ) yes.	129	78.2
( ) no.	34	20.6
no response.	2	1.2

17. LIST NAME AND ADDRESS OF TWO PEOPLE (not your parents) WHO SHOULD ALWAYS KNOW WHERE TO CONTACT YOU:

	Name	Address
1.	_____	_____
2.	_____	_____

GO BACK AND CHECK TO SEE IF YOU HAVE ANSWERED EVERY QUESTION. THANK YOU

APPENDIX B

Appendix Table 1. Variable Identification

Variable number	Identification
1.	Occupational aspiration scale
2.	General intelligence
3.	Verbal aptitude
4.	Numerical aptitude
5.	Spatial perception
6.	Form perception
7.	Clerical perception
8.	Motor coordination
9.	Finger dexterity
10.	Manual dexterity
11.	Outdoor interest
12.	Mechanical interest
13.	Computational interest
14.	Scientific interest
15.	Persuasive interest
16.	Artistic interest
17.	Literary interest
18.	Musical interest
19.	Social service
20.	Clerical interest
21.	General activity
22.	Restraint
23.	Ascendance
24.	Sociability
25.	Emotional stability
26.	Objectivity
27.	Friendliness
28.	Thoughtfulness
29.	Personal relations
30.	Masculinity
31.	Reading comprehension
32.	Reading speed
33.	Grade point average
34.	Rural-urban orientation inventory
35.	Social-class value orientation
36.	Number of semesters of extra curriculum activities
37.	Where student expects to get help
38.	Years education and training expected
39.	Father's education
40.	Where father lived first 5 years
41.	Mother's education
42.	Where mother lived first 5 years
43.	Student's estimate of parent's income
44.	Importance of job parents want for son
45.	Further help for education and training
46.	North-Hatt score student's occupation
47.	Number of persons living at home
48.	Number of semesters of vocational subjects
49.	Capabilities score
50.	Discrepancy score
51.	Age in months
52.	Number of semesters of vocational agriculture
53.	North-Hatt score father's occupation
54.	Number of senior boys in class
(55-60)	Regular home of the student
55.	Own parent
56.	Parent-step parent
57.	One parent only
58.	Grand parents
59.	Uncle or aunt
60.	Other
(61-67)	Educational status of eldest sibling
61.	No response
62.	No sibling
63.	Younger sibling
64.	Older sibling—didn't finish high school
65.	Older sibling—completed high school
66.	Older sibling—attended college
67.	Older sibling — completed college
(68-71)	Where student lives
68.	On farm
69.	In open country
70.	Village of under 2,500
71.	Village of over 2,500
(72-77)	Knowledge of work planned
72.	No choice
73.	Learn in school
74.	Learn on job
75.	General knowledge—no details
76.	Learn from friends
77.	Own experience
(78-83)	Student's estimate of ability for job
78.	No choice
79.	Below average
80.	Somewhat below average
81.	Average
82.	Somewhat above average
83.	Very much above average
(84-87)	Mother's work outside of home
84.	No response
85.	No job
86.	Part-time job
87.	Full-time job
(88-89)	Race
88.	White
89.	Negro
(90-92)	Father's church attendance
90.	No response
91.	Yes
92.	No

APPENDIX C

Appendix Table 2. Significance of Groups of Variables in the Analysis of the Occupational Aspirations Scale

Group	R^2_R [1]	df [2] f_1/f_2	F
School records	.6197	5/132	.912
Interview	.6060	8/132	1.184
GATB and inventory	.5624	11/132	2.285*
Kuder	.5372	4/132	8.541*
Guilford-Zimmerman	.6150	3/132	2.081

[1] R^2_R = multiple R^2 for restricted model;
R^2_F = (.6324) = multiple R^2 for full model.

[2] df = degrees of freedom; f_2 = 132.

* Significant at .05 level.

Appendix Table 3. Significance of Individual Variables in the Analysis of the Occupational Aspirations Scale

Variable deleted [1]	R^2_R [2]	$R^2_F - R^2_R$	df [3] f_1	F
2	.6321	.0003	1	.092
3	.6323	.0001	1	.022
4	.6323	.0001	1	.018
5	.6324			
6	.6308	.0016	1	.580
7	.6285	.0039	1	1.414
8	.6224	.0100	1	3.582
9	.6303	.0021	1	.737
10	.6293	.0031	1	1.104
11	.6279	.0045	1	1.611
12	.5749	.0575	1	20.624*
13	.6321	.0003	1	.106
14	.5978	.0346	1	12.429*
23	.6177	.0147	1	5.278*
24	.6249	.0075	1	2.692
28	.6314	.0010	1	.350
33	.6266	.0058	1	2.078
34	.6312	.0012	1	.414
35	.6172	.0152	1	5.465*
36	.6313	.0011	1	.389
38	.6171	.0153	1	5.478*
39	.6316	.0008	1	.275
41	.6322	.0002	1	.078
44	.6297	.0027	1	.974
46	.6324			
48	.6281	.0043	1	1.541
51	.6319	.0005	1	.190
53	.6322	.0002	1	.063
54	.6322	.0002	1	.053
90-92	.6273	.0051	2	.912

[1] See Appendix B for identification of variables.

[2] R^2_R = multiple R^2 for restricted model;
R^2_F = (.6324) = multiple R^2 for full model.

[3] df = degrees of freedom; f_2 = 132.

* Significant at .05 level.

APPENDIX D

Appendix Table 4. Significance of Groups of Variables in the Analysis of Capability Scores

Group	R^2_R [1]	$R^2_F - R^2_R$	df [2] f_1/f_2	F
Kuder	.8272	.0205	10/94	1.266
Guilford-Zimmerman	.8149	.0328	10/94	2.025**
Davis Reading	.7439	.1038	2/94	32.034*
Family	.8096	.0381	23/94	1.023
Home	.8371	.0106	11/94	.595
Self	.8067	.0410	11/94	2.304**
Occupations	.8424	.0053	10/94	.331

[1] R^2_R = multiple R^2 for restricted model;

R^2_F = (.8477) = multiple R^2 for full model.

[2] df = degrees of freedom; $f_2 = 94$.

* Significant at .05 level.

** Significant at .10 level.

Appendix Table 5. Significance of Individual Variables in the Analysis of Capability Scores

Variable deleted [1]	R^2_R [2]	$R^2_F - R^2_R$	$\frac{df}{f_1}$ [3]	F
11	.8477			
12	.8477			
13	.8431	.0046	1	2.831
14	.8470	.0007	1	.443
15	.8438	.0039	1	2.429
16	.8443	.0034	1	2.099
17	.8465	.0012	1	.753
18	.8477			
19	.8426	.0051	1	3.157
20	.8457	.0020	1	1.224
21	.8430	.0047	1	2.914
22	.8418	.0059	1	3.624
23	.8467	.0010	1	.617
24	.8416	.0061	1	3.782
25	.8477			
26	.8424	.0053	1	3.300
27	.8467	.0010	1	.637
28	.8460	.0017	1	1.093
29	.8440	.0037	1	2.309
30	.8477			
31	.8407	.0070	1	4.345**
32	.7938	.0539	1	33.318*
33	.8436	.0041	1	2.522
34	.8477			
35	.8467	.0010		.636
36	.8416	.0061	1	3.751
37	.8477			
38	.8461	.0016	1	1.028
39	.8477			
40	.8456	.0021	1	1.136
41	.8474	.0003	1	.174
42	.8454	.0023	1	1.409
43	.8436	.0041	1	2.539
44	.8477			
45	.8477			
46	.8477			
47	.8445	.0032	1	1.979
48	.8450	.0027	1	1.662
51	.8339	.0138	1	8.556*
52	.8477			
53	.8477			
54	.8454	.0023	1	1.384
55-60	.8405	.0072	5	.893
61-67	.8299	.0178	6	1.838
68-71	.8457	.0020	3	.407
72-77	.8424	.0053	5	.662
78-83	.8277	.0200	5	2.467**
84-87	.8465	.0012	3	.248
88-89	.8305	.0172	1	10.639*
Final model Nos. 31, 32, 51, 78-83, 88-89	.6971	.1506	62	1.500

[1] See Appendix B for identification of variables.

[2] R^2_R = multiple R^2 for restricted model;

R^2_F = (.8477) = multiple R^2 for full model.

[3] df = degrees of freedom; $f_{.1}$ = 94.

* Significant at .05 level.

** Significant at .10 level.

APPENDIX E

Appendix Table 6. Significance of Groups of Variables in the Analysis of Discrepancy Scores

Group	R^2_R [1]	$\frac{R_F^2 - R_R^2}{F}$	df [2] f_1/f_2	F
Kuder	.5837	.0424	10/94	1.064
Guilford-Zimmerman	.5881	.0379	10/94	.953
Davis Reading	.5253	.1008	2/94	12.665*
Family	.5547	.0714	23/94	.780
Home	.6145	.0016	11/94	.264
Self	.6020	.0241	11/94	.551
Occupations	.6212	.0049	10/94	.123

[1] R^2_R = multiple R^2 for restricted model;

R^2_F = (.6261) = multiple R^2 for full model.

[2] df = degrees of freedom; f_2 = 94.

* Significant at .05 level.

Appendix Table 7. Significance of Individual Variables in the Analysis of Discrepancy Scores

Variable deleted [1]	R^2_R [2]	$R^2_F - R^2_R$	df [3] / f_1	F
11	.6193	.0068	1	1,692
12	.6258	.0003	1	.068
13	.6262	..... [4]	1	
14	.6177	.0084	1	2.094
15	.6241	.0020	1	.487
16	.6262	..... [4]	1	
17	.6200	.0061	1	1.522
18	.6260	.0001	1	.004
19	.6170	.0091	1	2.301
20	.6283	..... [4]	1	
21	.6250	.0011	1	.275
22	.6258	.0003	1	.073
23	.6085	.0176	1	4.412**
24	.6072	.0188	1	4.728**
25	.6251	.0010	1	.249
26	.6167	.0094	1	2.358
27	.6246	.0014	1	.359
28	.6261			
29	.6238	.0023	1	.561
30	.6254	.0007	1	.174
31	.6166	.0095	1	2.378
32	.5609	.0652	1	16.368*
33	.6265	..... [4]	1	
34	.6261			
35	.6282	..... [4]	1	
36	.6284	..... [4]	1	
37	.6234	.0027	1	.661
38	.6220	.0041	1	1.013
39	.6287	..... [4]	1	
40	.6252	.0009	1	.220
41	.6209	.0052	1	1.298
42	.6271	..... [4]	1	
43	.6233	.0028	1	.687
44	.6261			
45	.6238	.0023	1	.558
46	.6265	..... [4]	1	
47	.6249	.0012	1	.299
48	.6228	.0032	1	.807
49	capability			
50	discrepancy			
51	.6245	.0015	1	.378
52	.6244	.0017	1	.425
53	.6260	.0001	1	.019
54	.6259	.0002	1	.045
55-60	.6179	.0082	5	.408
61-67	.5939	.0322	6	1.348
68-71	.6253	.0008	3	.059
72-77	.6215	.0046	5	.227
78-83	.6207	.0054	5	.268
84-87	.6204	.0057	3	.470
88-89	.6266	..... [4]	1	
Significant variables	.2689	.3572	68	1.320

[1] See Appendix B for identification of variables.

[2] R^2_R = multiple R^2 for the restricted model;

R^2_F = (.6261) = multiple R^2 for the full model.

[3] df = degrees of freedom; $f_2 = 94$.

[4] R^2_R exceeds R^2_F due to rounding.

* Significant at .05 level.

** Significant at .10 level.

APPENDIX F

Appendix Table 8. Means, Standard Deviations, and Correlations between Selected Variables and the OAS, Capabilities Score, and Discrepancy Score

Variable identification	Mean	Standard deviation	OAS	Cap. Score	Disc. Score
Occupational aspiration scale (OAS)	39.92	12.24			
Capabilities	17.87	16.37			
Discrepancy	77.37	15.27			
General intelligence	102.15	18.54	.420		
Verbal aptitude	95.93	16.00	.406		
Numerical aptitude	105.60	20.84	.395		
Spatial perception	101.41	18.94	.288		
Form perception	109.80	22.56	.350		
Clerical perception	106.26	14.14	.228		
Motor coordination	106.40	18.54	.366		
Finger dexterity	92.32	20.57	.340		
Manual dexterity	108.74	21.22	.205		
Outdoor interest	43.45	15.61	—.230	.072	.274
Mechanical interest	42.48	10.79	—.356	.111	.324
Computational interest	28.70	7.49	.272	.070	—.097
Scientific interest	42.93	10.38	.407	.258	.006
Persuasive interest	40.86	11.11	—.060	—.103	—.105
Artistic interest	24.50	7.75	.011	.173	.138
Literary interest	16.70	7.08	.153	—.134	—.226
Musical interest	12.16	6.41	.082	.005	—.035
Social service interest	38.82	9.88	—.127	—.341	—.233
Clerical interest	51.67	10.89	.080	—.191	—.270
General activity	18.45	4.81	.172	.219	.077
Restraint	15.58	4.35	.089	.034	—.063
Ascendance	15.45	4.45	.314	.157	—.147
Sociability	19.49	5.68	.240	.171	—.015
Emotional stability	15.87	5.25	.081	—.008	—.081
Objectivity	14.01	5.16	.136	.102	.001
Friendliness	12.85	4.95	—.013	—.029	.034
Thoughtfulness	18.59	4.10	.278	.108	—.121
Personal relations	14.82	4.39	.074	.070	.111
Masculinity	19.28	3.89	.107	.304	.223
Reading comprehension	11.92	8.14	.356	.666	.375
Reading speed	17.05	14.12	.404	.793	.477
Grade point average	2.22	.76	.301	.435	.171
Rural-urban orientation inventory	6.70	3.03	.177	.037	—.088
Social-class value orientation	28.08	2.58	.400	.255	—.041
North-Hatt score—student's occupation	58.76	31.30	.300	.285	.059
Number of persons living at home	4.73	2.12	—.103	—.204	—.105
Number of semesters of vocational subjects	5.45	3.44	—.216	—.148	—.021
Number of semesters of vocational agriculture	3.74	3.32	—.240	—.223	—.054
Semesters of extra-curricular activities	13.29	7.03	.374	.249	.001
North-Hatt score of father's occupation	64.32	10.82	.224	.224	.024
Number of boys in senior class	27.41	13.35	.197	.353	.171
Age in months	217.86	7.42	—.114	—.306	—.008
Years education and training expected [1]	4.89	1.99	.465	.337	.009
Father's education [2]	2.85	1.54	.285	.281	.121
Mother's education [2]	3.27	1.37	.266	.303	.156

[1] Coding for years of education and training expected: 1, none; 2, less than 1 year; 3, 1 year; 4, 2 years; 5, 3 years; 6, 4 years; and 7, 5 or more years.

[2] Coding for parental education: 1, 5 grades or less; 2, 6 to 8 grades; 3, 9 to 11 grades; 4, 12 grades; 5, above 12 grades; 6, college degree.

ACKNOWLEDGMENTS

The investigators wish to express their appreciation to the following persons for contributions to the study and the preparation of this report: H. J. Meenen, head, Department of Agricultural Economics and Rural Sociology, University of Arkansas; John C. Egermeier, consultant, Associate Professor of Education, Oklahoma State University; Roy B. Allen, head, Department of Educational Administration, University of Arkansas; Glenn A. Cole, head, Counseling Bureau, University of Arkansas; John Schmid, formerly head, Department of Education Foundations, University of Arkansas; Melvin R. Janssen, field research coordinator, Economic Development Division, ERS, U. S. Department of Agriculture; and Ben R. Worley, Employment Security Division, Arkansas Department of Labor. Special appreciation is expressed to Dr. Archibald O. Haller for permission to use his Occupational Aspiration Scale, and to Dr. Solomon Sutker for permission to use his Social Class Value Orientation Inventory and his Rural-Urban Orientation Inventory.

The more technical aspects of this study are treated in: James F. Golden, "Aspirations and Capabilities of Rural Youth in Selected Areas of Arkansas in Relation to Present and Projected Labor Market Requirements," unpublished Doctor's dissertation, University of Arkansas, Fayetteville, 1966.